

REMARKS/ARGUMENTS:

Claims 1-11 are pending in the application. Reexamination and reconsideration of the application, in view of the following remarks, are respectfully requested.

The present invention relates to a print mask for screen printing used for printing a printing paste onto a wafer so as to form bumps or protrusion electrodes on barrier metal layers provided on the wafer. The present invention includes a method of electronic components by using the print mask, and relates particularly to a method of manufacturing a flip-chip integrated circuit that is mounted on a circuit board by face-down bonding. (Applicant's specification, at p. 1, lines 6-13).

INTERVIEW SUMMARY:

On May 24, 2007, Patent Agent Barry Shuman conducted a telephone interview with Examiner Chuong A. Luu. During the interview, the Agent stated how the present invention was different from and overcame the Admitted Prior Art.

Specifically, the Agent explained how in Admitted Prior Art Figure 4, the perforations were not inclined. In contrast, in the present invention (independent claim 1), the perforations are inclined (Figure 3). The Examiner agreed with the Agent.

In addition, the Agent explained how in Admitted Prior Art Figure 10, the opening area of the perforation is not set smaller in the region of an arrangement where the density of arrangement of the perforations is higher. In contrast, in the present invention (independent claim 4), the opening area of the perforation is set smaller in the region of an arrangement where the density of arrangement of the perforations is higher (Figure 7). The Examiner agreed with the Agent.

Applicant would like to thank the Examiner for the courtesy of granting an interview.

CLAIM REJECTIONS UNDER 35 U.S.C. §102:

Claims 1, 2, and 4-6 stand rejected under 35 U.S.C. §102(b) as being anticipated by Admitted Prior Art (APA). The Applicant respectfully traverses this rejection.

Claim 1 is as follows:

A print mask used to form bumps on barrier metal layers of a wafer comprising a plurality of perforations, in a plan view, each elongated and disposed in linear arrangement for applying a paste via the perforations onto an object of printing,

wherein each of said perforation includes an edge disposed along the longitudinal direction in a plan view, said edge being inclined with respect to the direction perpendicular to the direction of arranging the perforations.

Applicant respectfully submits that APA cannot anticipate or render obvious claim 1, because APA fails to teach or suggest "wherein each of said perforation includes an edge disposed along the longitudinal direction in a plan view, said edge being inclined with respect to the direction perpendicular to the direction of arranging the perforations."

As discussed above in the "Interview Summary" section, the APA in Figure 4 fails to teach that the edge of the perforation is inclined, as is required by the present invention (Figure 3). Instead, the edge in APA Figure 4 is straight.

In light of the foregoing, Applicant respectfully submits that APA could not have anticipated or rendered obvious claim 1, because APA fails to teach or suggest each and every claim limitation. Claim 2 depends from claim 1 and cannot be

anticipated or rendered obvious for at least the same reasons as claim 1. Withdrawal of this rejection is thus respectfully requested.

Claim 4 is as follows:

A print mask comprising a number of perforations disposed in a single row or a plurality of rows for applying and printing a printing paste via the perforations onto a wafer so as to form bumps on barrier metal layers provided on the wafer,

wherein the density of arrangement of said perforations is set differently from region to region within the arrangement and the opening area of said perforation is set smaller in the region of an arrangement where the density of arrangement of said perforations is higher.

Applicant respectfully submits that APA cannot anticipate or render obvious claim 4, because APA fails to teach or suggest "the opening area of said perforation is set smaller in the region of an arrangement where the density of arrangement of said perforations is higher."

As discussed above in the "Interview Summary" section, in APA Figure 10, the opening area of the perforation is not set smaller in the region of an arrangement where the density of arrangement of the perforations is higher. In contrast, in the present invention (independent claim 4), the opening area of the perforation is set smaller in the region of an arrangement where the density of arrangement of the perforations is higher (Figure 7).

In light of the foregoing, Applicant respectfully submits that APA could not have anticipated or rendered obvious claim 4, because APA fails to teach or suggest each and every claim limitation.

Claims 5 and 6 depend from claim 4 and cannot be anticipated or rendered obvious for at least the same reasons as claim 4. Withdrawal of these rejections is thus respectfully requested.

CLAIM REJECTIONS UNDER 35 U.S.C. §103:

Claim 3 stands rejected under 35 U.S.C. §103(a) as being unpatentable over APA. The Applicant respectfully traverses this rejection. Claim 3 depends from Claim 1 and therefore, cannot be rendered obvious over APA for the reasons discussed above. Withdrawal of this rejection is thus respectfully requested.

Applicant believes the foregoing amendments comply with requirements of form and thus may be admitted under 37 C.F.R. § 1.116(b). Alternatively, if these amendments are deemed to touch the merits, admission is requested under 37 C.F.R. § 1.116(c). In this connection, these amendments were not earlier presented because they are in response to the matters pointed out for the first time in the Final Office Action.

Lastly, admission is requested under 37 C.F.R. § 1.116(b) as presenting rejected claims in better form for consideration on appeal.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, in view of the foregoing remarks, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (310) 785-4600 to discuss the steps necessary for placing the application in condition for allowance.

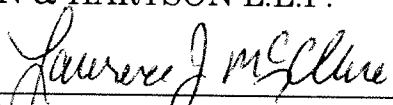
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If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,  
HOGAN & HARTSON L.L.P.

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